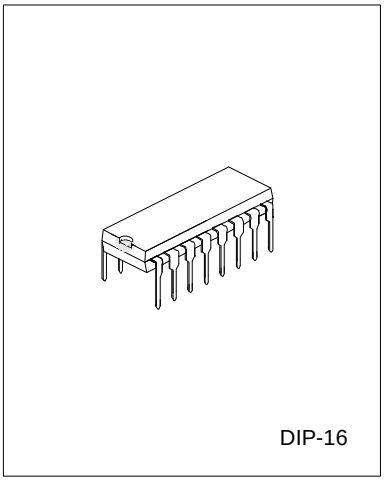
VISIT…

UTC TEA2025 LINEAR INTEGRATED CIRCUIT

STEREO AUDIO AMPLIFIER



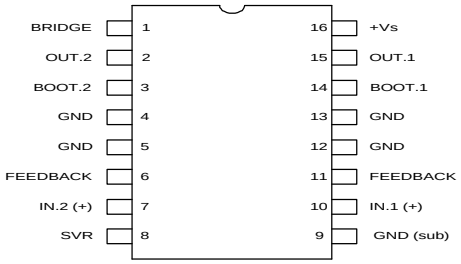
DESCRIPTION

The UTC TEA2025 is a monolithic integrated audio amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

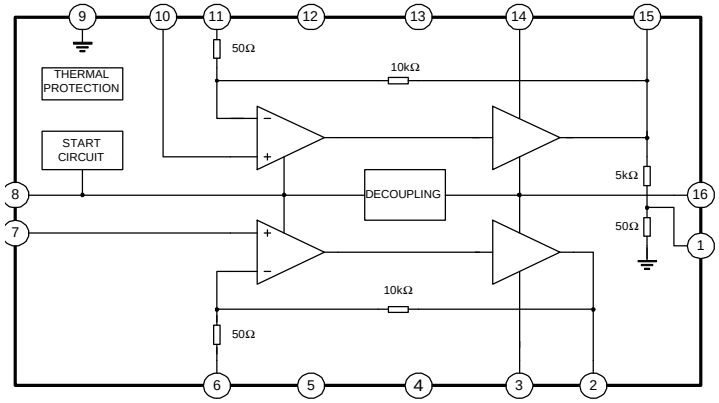
FEATURES

*Working Voltage down to 3V
*Few External components
*High Channel isolation
*Voltage gain up to 45dB(Adjustable with external resistor)
*Soft clipping
*Internal Thermal protection

PIN CONFIGURATIONS



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V_S	15	V
Output Peak Current	I_O	1.5	A
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-40 ~ +150	°C

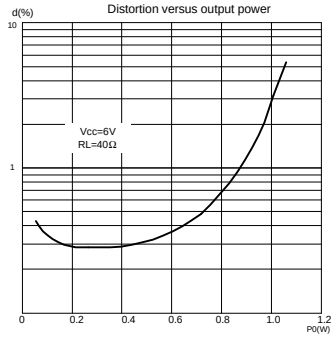
ELECTRICAL CHARACTERISTICS(T_a=25°C,V_{CC}=9V,Stereo,Unless otherwise specified)

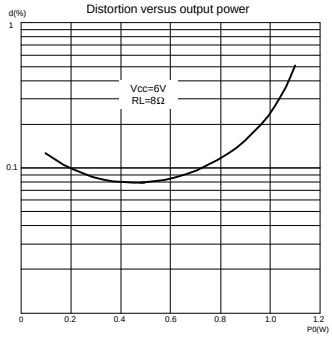
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V_S		3		12	V
Quiescent Current	I_Q			40	50	mA
Quiescent output voltage	V_O			4.5		V
Voltage gain	A_V	Stereo	43	45	47	dB
		Bridge	49	51	53	
Voltage gain difference	ΔA_V				+-1	dB
Input impedance	Ri			30		kΩ
Output Power	P_O	f=1kHz;d=10% Stereo per channel V_{CC}=9V;R_L=4Ω R_L=8Ω	1.7	2.3 1.3		W
		V_{CC}=6V;R_L=4Ω R_L=8Ω	0.7	1 0.6		
		V_{CC}=3V;R_L=4Ω		0.1		
		Bridge V_{CC}=9V;R_L=8Ω		4.7		
		V_{CC}=6V;R_L=4Ω		2.8		
Distortion	d	V_{CC}=9V;R_L=4Ω f=1kHz;P_O=250mW Stereo		0.3	1.5	%
		Bridge		0.5		
Supply voltage Rejection	SVR	R_G=0;A_V=45dB Vripple=150mVRMS Fripple=100Hz	40	46		dB
Input noise Voltage	Vn	A_V=200 Bandwidth: 20Hz to 20kHz R_G=0 R_G=10kΩ		1.5 3	3 6	μV
Cross-Talk	C.T.	R_G=10kΩ; f=1kHz;R_L=4Ω P_O=1W	40	55		dB

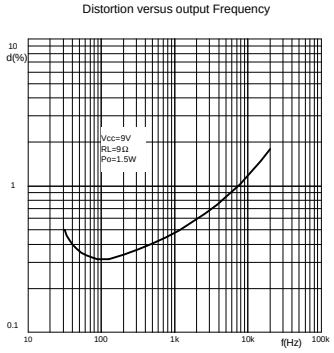
THERMAL RESISTANCE

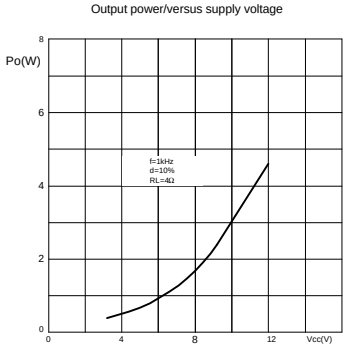
Rth(j-c):Junction to case thermal resistance 15°C/W
Rth(j-a):Junction to ambient thermal resistance 60°C/W

TYPICAL PERFORMANCE CHARACTERISTICS









APPLICATION CIRCUIT

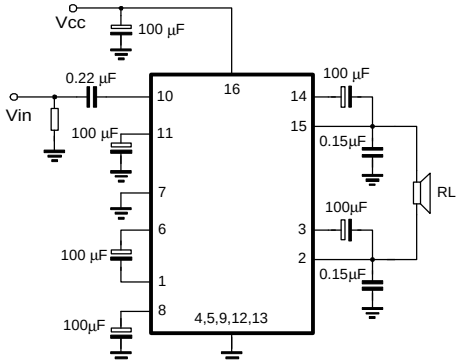


Fig. 5 Bridge Application

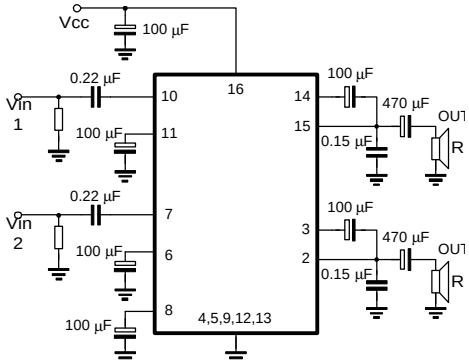
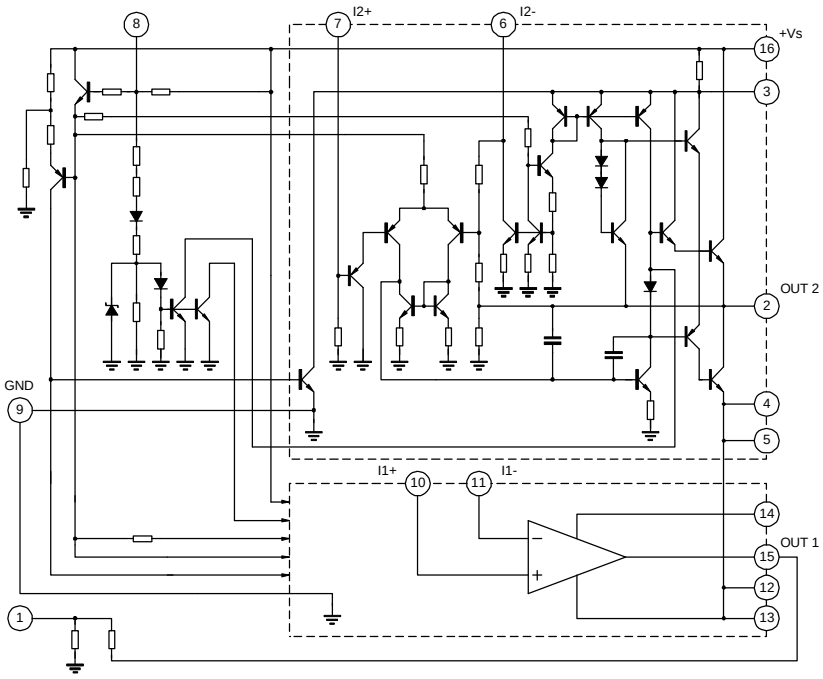


Fig.6 Stereo Application

SCHEMATIC DIAGRAM